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A

W. L. Abbott, J. M. Cioffi (Stanford University, Stanford, CA 94305), and H. K. Thapar (IBM, San Jose, CA), **Offtrack Interference and Equalization in Magnetic Recording**, *IEEE Transactions on Magnetics* **24**, No. 6, 2964-2966 (1988).

F. F. Abraham and I. P. Batra (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Theoretical Interpretation of Atomic-Force-Microscope Images of Graphite**, *Surface Science* **209**, No. 1/2, L125-L132 (1989).

M. Aeschlimann (Swiss Federal Institute of Technology, CH-8093 Zurich, Switzerland), G. L. Bona (IBM, Rüschlikon, Switzerland), F. Meier, M. Stampanoni, A. Vaterlaus, H. C. Siegmann (Swiss Federal Institute of Technology, Zurich, Switzerland), E. E. Marinero, and H. Notarys (IBM, San Jose, CA), **Exchange Coupling of Contacted Ferromagnetic Films: Fe on Amorphous TbFe**, *IEEE Transactions on Magnetics* **24**, No. 6, 3180-3184 (1988).

M. Ajtai (IBM Corporation, 650 Harry Road, San Jose, CA 95120), J. Komlos (University of California, La Jolla, CA), W. L. Steiger (Rutgers State University, New Brunswick, NJ), and E. Szemerédi (Hungarian Academy of Science, Budapest, Hungary), **Optimal Parallel Selection Has Complexity $O(\log \log N)$** , *Journal of Computer and System Sciences* **38**, No. 1, 125-133 (1989).

J. F. Akers (IBM Corporation, Old Orchard Road, Armonk, NY 10504), **Ethics and Competitiveness: Putting First Things First**, *Sloan Management Review* **30**, No. 2, 69-71 (1989).

R. Allenspach and A. Bischof (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Spin-Polarized Secondary Electrons from a Scanning Tunneling Microscope in Field Emission Mode**, *Applied Physics Letters* **54**, No. 6, 587-589 (1989).

B. Alpern (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and F. B. Schneider (Cornell University, Ithaca, NY), **Verifying Temporal Properties Without Temporal Logic**, *ACM Transactions on Programming Languages and Systems* **11**, No. 1, 147-167 (1989).

R. I. Altkorn, J. C. Andreshak, and A. Gupta (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Temperature Measurement During Laser Heating of Thin Films Using a Temperature Sensitive Phosphor**, *Applied Physics A* **48**, No. 3, 273-276 (1989).

R. Amann (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and U. G. Baitinger (University of Karlsruhe, Karlsruhe, Federal Republic of Germany), **Optimal State Chains and State Codes in Finite State Machines**, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **8**, No. 2, 153-170 (1989).

T. C. Arnoldussen (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **A Modular Transmission Line Reluctance Head Model**, *IEEE Transactions on Magnetics* **24**, No. 6, 2482-2484 (1988).

M. Artaki and P. J. Price (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Hot Phonon Effects in Silicon Field-Effect Transistors**, *Journal of Applied Physics* **65**, No. 3, 1317-1320 (1989).

B

D. Baeriswyl (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland) and K. Maki (University of Southern California, Los Angeles, CA), **Fate of Solitons, Polarons and Bipolarons in Conjugated Polymers: The Role of Interchain Coupling**, *Synthetic Metals* **28**, No. 3, D507-D512 (1989).

- Y. Bar-Yam, S. T. Pantelides (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and J. D. Joannopoulos (Massachusetts Institute of Technology, Cambridge, MA), **Ab Initio Pseudopotential Solid-State Calculations of Highly Electronegative First-Row Elements**, *Physical Review B* **39**, No. 5, 3396-3399 (1989).
- I. A. Beardsley (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Reconstruction of the Magnetization in a Thin Film by a Combination of Lorentz Microscopy and External Field Measurements**, *IEEE Transactions on Magnetics* **25**, No. 1, 671-677 (1989).
- D. Bernstein (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and I. Gertner (City University of New York, New York, NY), **Scheduling Expressions on a Pipelined Processor with a Maximal Delay of One Cycle**, *ACM Transactions on Programming Languages and Systems* **11**, No. 1, 57-66 (1989).
- I. Bertini, C. Luchinat, M. S. Viezzoli (University of Florence, Via G. Capponi 7, I-50121 Florence, Italy), L. Banci (University of Bologna, Bologna, Italy), S. H. Koenig, H. T. Leung (IBM, Yorktown Heights, NY), and J. E. Coleman (Yale University, New Haven, CT), **Copper (II) as a Probe of the Active Centers of Alkaline Phosphatase**, *Inorganic Chemistry* **28**, No. 2, 352-358 (1989).
- H. N. Bertram (University of California at San Diego, La Jolla, CA 92093) and I. A. Beardsley (IBM, San Jose, CA), **The Recording Process in Longitudinal Particulate Media**, *IEEE Transactions on Magnetics* **24**, No. 6, 3234-3248 (1988).
- G. L. Best, K. L. Deckert, S. E. Millman, and G. P. Singh (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Effect of Disk Roughness on Slider Dynamics**, *IEEE Transactions on Magnetics* **24**, No. 6, 2748-2750 (1988).
- D. K. Bhattacharya and G. C. Lie (IBM Corporation, Neighborhood Road, Kingston, NY 12401), **Molecular-Dynamics Simulations of Nonequilibrium Heat and Momentum Transport in Very Dilute Gases**, *Physical Review Letters* **62**, No. 8, 897-900 (1989).
- M. Blaum (IBM Corporation, 650 Harry Road, San Jose, CA 95120), P. G. Farrell, and H. C. A. Vantilborg (California Institute of Technology, Pasadena, CA), **Multiple Burst Correcting Array Codes**, *IEEE Transactions on Information Theory* **34**, No. 5, 1061-1066 (1988).
- K. W. Blazey, A. M. Portis (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), and F. H. Holtzberg (IBM, Yorktown Heights, NY), **Fluxon Nucleation by Microwave Currents in Josephson Junctions**, *Physica C* **157**, No. 1, 16-24 (1989).
- J. D. Brock, D. Y. Noh, B. R. McClain, J. D. Litster, R. J. Birgeneau (Massachusetts Institute of Technology, Cambridge, MA 02139), A. Aharony (Tel Aviv University, Tel Aviv, Israel), P. M. Horn (IBM, Yorktown Heights, NY), and J. C. Liang (Tektronix, Inc., Beaverton, OR), **Hexatic Ordering in Freely Suspended Liquid Crystal Films**, *Zeitschrift für Physik B* **74**, No. 2, 197-213 (1989).
- H. R. Brown, A. S. Argon, R. E. Cohen (IBM Corporation, 650 Harry Road, San Jose, CA 95120), O. S. Gebizlioglu (Massachusetts Institute of Technology, Cambridge, MA 02139), and E. J. Kramer (Cornell University, Ithaca, NY), **New Mechanism for Craze Toughening of Glassy Polymers**, *Macromolecules* **22**, No. 2, 1002-1004 (1989).
- V. Brusic, M. Russak, R. Schad, G. Frankel, A. Selius, D. DiMilia (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and D. Edmonson (IBM, Rochester, MN), **Corrosion of Thin Film Magnetic Disk: Galvanic Effects of the Carbon Overcoat**, *Journal of the Electrochemical Society* **136**, No. 1, 42-46 (1989).
- S. J. Buckley (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Teaching Complaint Motion Strategies**, *IEEE Transactions on Robotics and Automation* **5**, No. 1, 112-118 (1989).
- W. Bürger (IBM Corporation, Gaithersburg, MD 20878), **Networking of Secure Systems**, *IEEE Journal of Selected Areas in Communications* **7**, No. 2, 312-318 (1989).
- G. Burns, P. Strobel, G. V. Chandrashekar, F. H. Dacol, F. Holtzberg, and M. W. Shafer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Raman-Active Phonons in the High-Temperature Superconductors and Results in $\text{Bi}_2\text{Sr}_2\text{CuO}_6$** , *Physical Review B* **39**, No. 4, 2245-2250 (1989).

C

R. Camposano (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and W. Rosenstiel (University of Karlsruhe, Karlsruhe, Federal Republic of Germany), **Synthesizing Circuits from Behavioral Descriptions**, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **8**, No. 2, 171-180 (1989).

A. Capotondi (Massachusetts Institute of Technology, Cambridge, MA 02139), V. Sonnad, and S. Chin (IBM, Kingston, NY), **Parallel Solution of the Shallow Water Equations Using an Explicit Finite Difference Algorithm**, *Computer Physics Communications* **52**, No. 2, 195-205 (1989).

F. Catalina, C. N. Afonso, (C.S.I.C., Serrano 121, E-28006 Madrid, Spain), and C. Ortiz (IBM, San Jose, CA), **Electrical Resistivity and Structural Changes in Amorphous $\text{Ge}_{1-x}\text{Al}_x$ Thin Films Under Thermal Annealing**, *Thin Solid Films* **167**, 57-65 (1988).

F. Catalina, C. N. Afonso, E. Rollan (CSIC, Serrano 121, 28006 Madrid, Spain), and C. Ortiz (IBM, San Jose, CA), **Metastable Phase Formation with Dendrite Growth During Laser Induced Rapid Solidification of $\text{Al}_{50}\text{Ge}_{50}$ Sputtered Thin Films**, *Journal of the Less-Common Metals* **145**, 209-216 (1988).

L. S. Chang and G. Olive (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Factors Influencing the Lifetime of Thermal Ink Jet Heaters**, *Proceedings of SID* **28**, No. 4, 477-482 (1987).

M. M. Chen, M. A. Kakalec, K. Ju, C. Tsang, and G. Castillo (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Effects of Sputtering Conditions on the Recording Characteristics of Iron-Oxide Thin-Film Media**, *IEEE Transactions on Magnetics* **24**, No. 6, 2988-2990 (1988).

Y.-H. Chiao and D. R. Clarke (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Direct Observation of Dislocation Emission from Crack Tips in Silicon at High Temperatures**, *Acta Metallurgica* **37**, No. 1, 203-219 (1989).

M. F. Chisholm and D. A. Smith (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Low-Angle Tilt Grain Boundaries in $\text{YBa}_2\text{Cu}_3\text{O}_7$ Superconductors**, *Philosophical Magazine A* **59**, No. 2, 181-197 (1989).

S. Chopra (New York University, Trinity Place, New York, NY 10003), D. L. Jensen (IBM, Yorktown Heights, NY), and E. L. Johnson (State University of New York, Stony Brook, NY), **Polyhedra of Regular P-Nary Group Problems**, *Mathematical Programming* **43**, No. 1, 1-29 (1989).

C. Choquet, C. Plossu, M. Berenguer, B. Balland (C.N.R.S., 20 Avenue Albert Einstein, 69621 Villeurbanne, France), and G. Barbottin (IBM France, Corbeil-Essonnes, France), **Ionic Contamination of Thin Silica Films from NaI and KCl Solutions**, *Thin Solid Films* **167**, 45-56 (1989).

R. T. Collins, Z. Schlesinger, G. V. Chandrashekar, and M. W. Shafer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Infrared Study of Anisotropy in Single-Crystal $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$** , *Physical Review B* **39**, No. 4, 2251-2254 (1989).

A. E. Conway (GTE Laboratories Inc., Waltham, MA 02254), E. de Souza e Silva (Universidade Federal do Rio de Janeiro, Rio de Janeiro, Brazil), and S. S. Lavenberg (IBM, Yorktown Heights, NY), **Mean Value Analysis by Chain of Product Form Queuing Networks**, *IEEE Transactions on Computers* **38**, No. 3, 432-442 (1989).

R. F. Cook (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Effective-Medium Theory for the Fracture of Fractal Porous Media**, *Physical Review B* **39**, No. 4, 2811-2814 (1989).

R. F. Cook (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Influence of Crack Velocity Thresholds on Stabilized Nonequilibrium Fracture**, *Journal of Applied Physics* **65**, No. 5, 1902-1910 (1989).

D. Coppersmith and P. Raghavan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Multidimensional On-line Bin Packing: Algorithms and Worst-Case Analysis**, *Operations Research Letters* **8**, No. 1, 17-20 (1989).

G. Couturier, D. Kaiser, S. von Molnar (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and P. Becla (Massachusetts Institute of Technology, Cambridge, MA), **Oscillatory Photoconductivity and Photomagnetoresistance in the Diluted Magnetic Semiconductor $\text{Cd}_{1-x}\text{Mn}_x\text{Te}$** , *Physical Review B* **39**, No. 3, 1663-1668 (1989).

R. Cypher (University of Washington, Seattle, WA 98195), J. L. C. Sanz (IBM, San Jose, CA), and L. Snyder (University of Washington, Seattle, WA), **An EREW PRAM Algorithm for Image Component Labeling**, *IEEE Transactions on Pattern Analysis and Machine Intelligence* **11**, No. 3, 258-262 (1989).

D

E. de Souza e Silva (Federal University of Rio de Janeiro, Rio de Janeiro, Brazil) and H. R. Gail (IBM, Yorktown Heights, NY), **Calculating Availability and Performability Measures of Repairable Computer Systems Using Randomization**, *Journal of the Association for Computing Machinery* **36**, No. 1, 171-193 (1989).

M. R. Deakin (Florida State University, Tallahassee, FL 32306) and O. R. Melroy (IBM, San Jose, CA), **Monitoring the Growth of an Oxide Film on Aluminum *In Situ* with the Quartz Crystal Microbalance**, *Journal of the Electrochemical Society* **136**, No. 2, 349-352 (1989).

J. L. Dektar and N. P. Hacker (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Novel Photoinduced Electron Transfer Reactions Between Naphthalene and Triphenylsulfonium Salts**, *Journal of Photochemistry and Photobiology A* **46**, No. 2, 233-238 (1989).

J. E. Demuth, U. K. Koehler, R. J. Hamers, and P. Kaplan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Phase Separation on an Atomic Scale: The Formation of a Novel Quasiperiodic 2D Structure**, *Physical Review Letters* **62**, No. 6, 641-644 (1989).

D. J. DiMaria and J. W. Stasiak (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Trap Creation in Silicon Dioxide Produced by Hot Electrons**, *Journal of Applied Physics* **65**, No. 6, 2342-2356 (1989).

G. J. Dolan, G. V. Chandrashekar, T. R. Dinger, C. Feild, and F. Holtzberg (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Vortex Structure in $\text{YBa}_2\text{Cu}_3\text{O}_7$ and Evidence for Intrinsic Pinning**, *Physical Review Letters* **62**, No. 7, 827-830 (1989).

K. Domen and T. J. Chuang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Laser Induced Photodissociation and Desorption. I. CH_2I_2 Adsorbed on Al_2O_3** , *Journal of Chemical Physics* **90**, No. 6, 3318-3331 (1989).

K. Domen and T. J. Chuang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Laser Induced Photodissociation and Desorption. II. CH_2I_2 Adsorbed on Ag**, *Journal of Chemical Physics* **90**, No. 6, 3332-3338 (1989).

D. Dove, G. Diniz, R. John, J. Karidis, R. Lane, and D. Manzer (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **High Resolution Resistive Ribbon Printing for Typesetter Application**, *Journal of Imaging Science* **33**, No. 1, 7-10 (1989).

J. R. Driscoll (Carnegie Mellon University, Pittsburgh, PA 15218), N. Sarnak (IBM, Yorktown Heights, NY), D. D. Sleator (Princeton University, Princeton, NJ), and R. E. Tarjan (AT&T Bell Laboratories, Murray Hill, NJ), **Making Data Structures Persistent**, *Journal of Computer and System Sciences* **38**, No. 1, 86-124 (1989).

E

H. El-Shishiny (IBM Egypt, 56 Gameat El-Doual El-Arabia Street, Cairo, Egypt) and S. I. Ghabbour (Cairo University, Giza, Egypt), **Some Aspects of Soil Ecology in Africa**, *Speculations in Science and Technology* **11**, No. 4, 281-293 (1988).

B. G. Elmegreen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Pressure and Metallicity Dependence for Molecular Cloud Correlations and the Calibration of Mass**, *Astrophysical Journal* **338**, No. 1, 178-196 (1989).

R. Erlandsson, G. Hadzioannou, C. M. Mate, G. M. McClelland, and S. Chiang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Atomic Scale Friction Between the Muscovite Mica Cleavage Plane and a Tungsten Tip**, *Journal of Chemical Physics* **89**, No. 8, 5190-5193 (1988).

F

P. Fahey, S. S. Iyer, and G. J. Scilla (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Experimental Evidence of Both Interstitial-Assisted and Vacancy-Assisted Diffusion of Ge in Si**, *Applied Physics Letters* **54**, No. 9, 843-845 (1989).

Ch. Fattinger and D. Grischkowsky (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Terahertz Beams**, *Applied Physics Letters* **54**, No. 6, 490-492 (1989).

F. Faupel, C. H. Yang, S. T. Chen, and P. S. Ho (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Adhesion and Deformation of Metal/Polyimide Layered Structures**, *Journal of Applied Physics* **65**, No. 5, 1911-1917 (1989).

R. P. Ferrier (University of Glasgow, Glasgow G12 800, Scotland), F. J. Martin, T. C. Arnoldussen, and L. L. Nunnelley (IBM Corporation, Tucson, AZ), **Lorentz Image Derived Film Media Noise**, *IEEE Transactions on Magnetics* **24**, No. 6, 2709-2711 (1988).

M. P. A. Fisher and D. H. Lee (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Correspondence Between Two-Dimensional Bosons and a Bulk Superconductor in a Magnetic Field**, *Physical Review B* **39**, No. 4, 2756-2759 (1989).

E. A. Fitzgerald, G. P. Watson, R. E. Proane, D. G. Ast (Cornell University, Ithaca, NY 14853), P. D. Kirchner, G. D. Pettit, and J. M. Woodall (IBM, Yorktown Heights, NY), **Nucleation Mechanisms and the Elimination of Misfit Dislocations at Mismatched Interfaces by Reduction in Growth Area**, *Journal of Applied Physics* **65**, No. 6, 2220-2237 (1989).

D. R. Fredkin (University of California at San Diego, La Jolla, CA 92093) and T. R. Koehler (IBM, San Jose, CA), **Numerical Micromagnetics of Small Particles**, *IEEE Transactions on Magnetics* **24**, No. 6, 2362-2367 (1988).

G

Y. D. Galeuchet, P. Roentgen, and V. Graf (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), **Buried GaInAs/InP Layers Grown on Nonplanar Substrates by One-Step Low-Pressure Metalorganic Vapor Phase Epitaxy**, *Applied Physics Letters* **53**, No. 26, 2638-2640 (1989).

R. J. Gambino, T. S. Plaskett, and R. R. Ruf (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Exchange Coupled Magneto-Optic Layers**, *IEEE Transactions on Magnetics* **24**, No. 6, 2557-2559 (1988).

S. M. Gates, C. M. Greenlief, D. B. Beach (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and R. R. Kunz (MIT Lincoln Laboratories, Lexington, MA), **Reactive Sticking Coefficient of Silane on the Si(111)-(7 × 7) Surface**, *Chemical Physics Letters* **154**, No. 6, 505-510 (1989).

S. M. Gates, R. R. Kunz, and C. M. Greenlief (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Silicon Hydride Etch Products from the Reaction of Atomic Hydrogen with Si(100)**, *Surface Science* **207**, No. 2/3, 364-384 (1989).

C. F. Gerald (The University of Texas, P.O. Box 830688, Richardson, TX 75083), R. D. Brown III (IBM, Yorktown Heights,

NY), W. P. Cacheris (The University of Texas, Richardson, TX), S. H. Koenig (IBM, Yorktown Heights, NY), A. D. Sherry (The University of Texas, Richardson, TX), and M. Spiller (IBM, Yorktown Heights, NY), **Evaluation of Polyaza Macrocyclic Methylene Phosphonate Chelates of Gd^{3+} Ions as MRI Contrast Agents**, *Magnetic Resonance in Medicine* **9**, No. 1, 94-104 (1989).

M. Gesley (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Thermal-Field-Emission Electron Optics for Nanolithography**, *Journal of Applied Physics* **65**, No. 3, 914-926 (1989).

S. P. Ghosh (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **SIAM Statistics Information Access Method**, *Information Sciences* **13**, No. 4, 359-368 (1988).

P. Gianni (IBM Italy, Pisa, Italy), B. Trager (IBM, Yorktown Heights, NY), and G. Zacharias (Massachusetts Institute of Technology, Cambridge, MA), **Gröbner Bases and Primary Decomposition of Polynomial Ideals**, *Journal of Symbolic Computation* **6**, Nos. 2&3, 149-167 (1988).

J. K. Gimzewski (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), J. K. Sass (Fritz-Haber Institute of Max-Planck Society, Berlin, Federal Republic of Germany), R. R. Schlitter (IBM, Rüschlikon, Switzerland), and J. Scott (Fritz-Haber Institute of Max-Planck Society, Berlin, Federal Republic of Germany), **Enhanced Photon Emission in Scanning Tunnelling Microscopy**, *Europhysics Letters* **8**, No. 5, 435-440 (1989).

R. E. Gomory (IBM Corporation, Armonk, NY 10504), **Turning Bright Ideas into Timely Products**, *Agricultural Engineering* **69**, No. 6, 12+ (1988).

P. F. Green (Sandia National Laboratories, Albuquerque, NM 87185), T. P. Russell (IBM, San Jose, CA), R. Jérôme, and M. Granville (Université Liège, Liège, Belgium), **Temperature Dependence of Tracer Diffusion of Homopolymers into Nonequilibrium Diblock Copolymer Structures**, *Macromolecules* **22**, No. 2, 908-913 (1989).

H

R. Haight and J. A. Silberman (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Surface Intervalley Scattering on GaAs(110): Direct Observation with Picosecond Laser Photoemission**, *Physical Review Letters* **62**, No. 7, 815-818 (1989).

A. R. Halbert, S. J. P. Todd, and J. R. Woodward (IBM United Kingdom Scientific Center, St. Clements Street, Winchester SO23 9DR, England), **Generalizing Active Zones for Set-Theoretic Solid Models**, *Computer Journal* **32**, No. 1, 86-89 (1989).

J.-M. Halbout, P. May, and G. Chiu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ultrashort Electron-Pulse Probing of Integrated Circuits**, *Journal of Modern Optics* **35**, No. 12, 1995-2005 (1988).

V. M. Hallmark, R. Sooriyakumaran, R. D. Miller, and J. F. Rabolt (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Studies of Chain Conformational Kinetics in Poly(di-n-alkylsilanes) by Spectroscopic Method. III. Fourier Transform Raman Studies of Unsymmetric Side Chain Substitution**, *Journal of Chemical Physics* **90**, No. 4, 2486-2491 (1989).

V. Hallmark and J. F. Rabolt (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Fourier Transform Raman Studies of Secondary Structure in Synthetic Polypeptides**, *Macromolecules* **22**, No. 1, 500-502 (1989).

J. Y. Halpern and M. Y. Vardi (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **The Complexity of Reasoning About Knowledge and Time: I. Lower Bounds**, *Journal of Computer and System Sciences* **38**, No. 1, 195-237 (1989).

W. G. Hatton, H. P. Hacker, and P. H. Kasai (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Indium Dicarboxylate Matrix Isolation ESR and IR Study**, *Journal of Physical Chemistry* **93**, No. 4, 1328-1332 (1988).

M. Hatzakis (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Organo-Silicon Polymers for Lithographic Applications**, *Makromolekulare Chemie* **24**, 169-175 (1989).

M. K. Haynes and N. J. Jubb (IBM Corporation, Tucson, AZ 85744), **Experimental Determination of the Magneto-Optic Constants of Rare-Earth Transition Metal Alloys**, *IEEE Transactions on Magnetics* **24**, No. 6, 2784-2786 (1988).

M. Heiblum, D. Galbi, and M. Weckwerth (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Observation of Single-Optical-Phonon Emission**, *Physical Review Letters* **62**, No. 9, 1057-1060 (1989).

T. V. Herak, T. T. Chau, D. J. Thomson, S. R. Mejia (University of Manitoba, Winnipeg R3T 2N2, Manitoba, Canada), D. A. Buchanan (IBM, Yorktown Heights, NY), and K. C. Kao (University of Manitoba, Winnipeg, Canada), **Low-Temperature Deposition of Silicon Dioxide Films from Electron Cyclotron Resonant Microwave Plasmas**, *Journal of Applied Physics* **65**, No. 6, 2457-2463 (1989).

D. A. Herman, P. L. Trouilloud, B. E. Argyle, B. Petek, L. T. Romankiw, J. S. Bezama, D. L. Rath, D. F. Canaper, and M. L. Komsa (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Edge Curling Wall Discontinuities and Interactions with Bloch Walls in Easy Axis Permalloy**, *IEEE Transactions on Magnetics* **24**, No. 6, 3066-3068 (1988).

W. D. Hinsberg and K. K. Kanazawa (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Quartz Crystal Microbalance Thin-Film Dissolution Rate Monitor**, *Review of Scientific Instruments* **60**, No. 3, 489-492 (1989).

F. Holtzberg, P. Strobel, and T. K. Worthington (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Crystal Growth of High T_c Cuprate Superconductors**, *Journal of Magnetism and Magnetic Materials* **76&77**, 626-630 (1988).

S. E. Hornstrom (Linköping University, Linköping, Sweden), A. Charai, O. Thomas, L. Krusin-Elbaum, P. M. Fryer, J. M. E. Harper (IBM, Yorktown Heights, NY), S. Gong, and A. Robertsson (Linköping University, Linköping, Sweden), **Interfacial Reactions Between Al and RuO_2 , MoO_3 and W_2O_5 Diffusion Barriers on Si**, *Surface and Interface Analysis* **14**, No. 1 & 2, 7-12 (1989).

I

H. Ito, A. F. Renaldo, and M. Ueda (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Reaction of α -(Trifluoromethyl)Styrene with Anionic Initiators**, *Macromolecules* **22**, No. 1, 45-51 (1989).

H. Ito and R. Schwalm (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Thermally Developable, Positive Resist Systems With High Sensitivity**, *Journal of the Electrochemical Society* **136**, No. 1, 241-245 (1989).

H. Ito, M. Veda, and A. F. Renaldo (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Thermally Developable, Positive Tone, Oxygen RIE Barrier Resist for Bilayer Lithography**, *Journal of the Electrochemical Society* **136**, No. 1, 245-249 (1989).

J

R. L. Jackson, G. W. Tyndall, and S. D. Sather (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **CW and Pulsed UV Laser-Induced Deposition from $\text{Cr}(\text{CO})_6$, $\text{Mo}(\text{CO})_6$ and $\text{W}(\text{CO})_6$** , *Applied Surface Science* **36**, No. 1-4, 119-133 (1989).

C. M. Jefferson (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Variable Head to Disk Spacing Controller for Magnetic Recording on Rigid Disks**, *IEEE Transactions on Magnetics* **24**, No. 6, 2736-2738 (1988).

I. Johannsen, J. B. Torrance, and A. Nazzari (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A New Electron-Rich Network Polymer: Poly(1,3,5-triaminobenzene)**, *Macromolecules* **22**, No. 2, 566-570 (1989).

D. Jousse, J. Kanicki, and J. H. Stathis (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Observation of Multiple Silicon Dangling Bond Configurations in Silicon Nitride**, *Applied Physics Letters* **54**, No. 11, 1043-1045 (1989).

K

K. Kajisa, S. Shimizu, S. Wakabayashi, and K. Sekiya (IBM Japan Ltd., Tokyo, Japan), **Advanced 256-Color Kanji/Image Display System**, *Proceedings of SID* **28**, No. 3, 291-295 (1987).

R. Kallenbach, C. Zimmermann, D. H. McIntyre, T. W. Hänsch (Max-Planck-Institut für Quantenoptik, D-8046 Garching bei München, Federal Republic of Germany), and R. G. DeVoe (IBM, San Jose, CA), **A Blue Dye Laser with Sub-Kilohertz Stability**, *Optics Communication* **70**, No. 1, 56-60 (1989).

R. B. Kaner, S.-M. Huang, C.-H. Lin (University of California, Los Angeles, CA 90024), and J. H. Kaufman (IBM, San Jose, CA), **Chemical Reduction of Polyacetylene with Incorporation of Divalent Dopant Cations**, *Synthetic Metals* **28**, No. 3, D115-D125 (1989).

J. Kanicki and S. Hug (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Spatial Charge Distribution in the Plasma-Enhanced Chemical Vapor Deposited Nitrogen-Rich Silicon Nitride**, *Applied Physics Letters* **54**, No. 8, 733-735 (1989).

T. Karatsu (The University of Texas, Austin, TX 78712), R. D. Miller, R. Sooriyakumaran (IBM, San Jose, CA), and J. Michl (The University of Texas, Austin, TX), **Mechanism of the Photochemical Degradation of Poly(di-n-alkylsilanes) in Solution**, *Journal of the American Chemical Society* **111**, No. 3, 1140-1141 (1989).

J. H. Kaufman, O. R. Melroy (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and G. M. Dimino (University of California, Santa Cruz, CA), **Information-Theoretic Study of Pattern Formation: Rate of Entropy Production of Random Fractals**, *Physical Review A* **39**, No. 3, 1420-1428 (1989).

W. D. Kehr, J. L. Nix, and D. P. Camps (IBM Corporation, Tucson, AZ 85744), **Integrated Thin Film Head for Flexible Disks**, *IEEE Transactions on Magnetics* **24**, No. 6, 2615-2616 (1988).

H. D. Keith, F. J. Padden, Jr. (AT&T Bell Laboratories, Murray Hill, NJ 07974), and T. P. Russell (IBM, San Jose, CA), **Morphological Changes in Polyesters and Polyamides Induced by Blending with Small Concentrations of Polymer Diluents**, *Macromolecules* **22**, No. 2, 666-675 (1989).

R. W. Keyes (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Potentials and Junctions in Degenerate Semiconductors**, *Solid-State Electronics* **32**, No. 2, 159-164 (1989).

R. W. Keyes (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Two-Level Systems in the Mechanical Properties of Silicon at Low Temperatures**, *Physical Review Letters* **62**, No. 11, 1324 (1989).

I. Y. Khandros (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and M. Ohring (Stevens Institute of Technology, Hoboken, NJ), **A New Experimental Technique for Studying Mass Transport in Liquid Metals**, *Journal of Materials Science* **24**, No. 1, 252-258 (1989).

M. Kindelan (IBM European Center for Scientific and Engineering Computing, Via Giorgione 159, 00147 Rome, Italy), G. Seriani (Osservatorio Geofisico Sperimentale, Trieste, Italy), and P. Sguazzero (IBM, Rome, Italy), **Elastic Modelling and Its Application to Amplitude Versus Angle Interpretation**, *Geophysical Prospecting* **37**, No. 1, 3-30 (1989).

C. M. Knoedler, L. Osterling, and M. Heiblum (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Inert Gas Reactive Ion Etching Damage to GaAs Using Inverted Heterojunctions**, *Journal of Applied Physics* **65**, No. 4, 1800-1802 (1989).

R. H. Koch, W. J. Gallagher, B. Bumble (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and W. Y. Lee (IBM, San Jose, CA), **Low-Noise Thin-Film TlBaCaCuO dc SQUIDS Operated at 77K**, *Applied Physics Letters* **54**, No. 10, 951-953 (1989).

W. Koch, B. Liu (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and D. J. Defrees (Molecular Research Institute, Palo Alto, CA), **Structure of the 2-Norbornyl Cation**, *Journal of the American Chemical Society* **111**, No. 4, 1527-1528 (1989).

T. Kodas, A. Datye (University of New Mexico, Albuquerque, NM 87131), V. Lee, and E. Engler (IBM, San Jose, CA), **Single-Crystal $\text{YBa}_2\text{Cu}_3\text{O}_7$ Particle Formation by Aerosol Decomposition**, *Journal of Applied Physics* **65**, No. 5, 2149-2151 (1989).

T. T. Kodas and P. B. Comita (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Diffusive Transport Relaxation Technique for Studying Laser-Induced Chemical Vapor Deposition Reactions at High Pressures**, *Journal of Applied Physics* **65**, No. 6, 2513-2522 (1989).

G. Koren (Technion-Israel Institute of Technology, Haifa 32000, Israel), A. Gupta, E. A. Giess, A. Segmüller, and R. B. Laibowitz (IBM, Yorktown Heights, NY), **Epitaxial Films of $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$ on NdGaO_3 , LaGaO_3 , and SrTiO_3 Substrates Deposited by Laser Ablation**, *Applied Physics Letters* **54**, No. 11, 1054-1056 (1989).

D. Krökel, D. Grischkowsky, and M. B. Ketchen (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Subpicosecond Electrical Pulse Generation Using Photoconductive Switches with Long Carrier Lifetimes**, *Applied Physics Letters* **54**, No. 11, 1046-1047 (1989).

L. Krusin-Elbaum (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Effect of Oxygen on the Electrical Transport in RuO_2** , *Thin Solid Films* **169**, No. 1, 17-24 (1989).

L. Krusin-Elbaum, A. P. Malozemoff, Y. Yeshurun, D. C. Cronmeyer, and F. Holtzberg (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Temperature Dependence of Lower Critical Fields in Y-Ba-Cu-O Crystals**, *Physical Review B* **39**, No. 4, 2936-2939 (1989).

T. F. Kuech, M. A. Tischler, and R. Potemski (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Selective Epitaxy in the Conventional Metalorganic Vapor Phase Epitaxy of GaAs**, *Applied Physics Letters* **54**, No. 10, 910-912 (1989).

S. K. Kumar, M. Vacatello, and D. Y. Yoon (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Off-Lattice Monte Carlo Simulations of Polymer Melts Confined Between Two Plates**, *Journal of Chemical Physics* **89**, No. 8, 5206-5215 (1988).

K. Kunimatsu (Hokkaido University, Sapporo 060, Japan), M. G. Samant, and H. Seki (IBM, San Jose, CA), **In-Situ FT-IR Spectroscopic Study of Bisulfate and Sulfate Adsorption on Platinum Electrodes. Part 1. Sulfuric Acid**, *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry* **258**, No. 1, 163-177 (1989).

L

F. S. Lai (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Coupling Capacitances in VLSI Circuits Calculated by Multi-Dimensional Discrete Fourier Series**, *Solid-State Electronics* **32**, No. 2, 141-148 (1989).

S. E. Lambert and M. L. Williams (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Recording Head Characterization Using 1- μm -Wide Discrete Tracks**, *IEEE Transactions on Magnetics* **24**, No. 6, 2832-2834 (1988).

G. Langner and W. Stickel (IBM Corporation, Route 52, Hopewell Junction, NY 12533), **Electron Optical Performance of Electron Beam Lithography Columns Predicted by a Simple Model**, *Journal of Vacuum Science and Technology B* **7**, No. 1, 98-103 (1989).

O. Lanzi III (Case Western Reserve University, Cleveland, OH 44106), U. Landau, J. D. Reid, and R. T. Galasco (IBM, Endicott, NY), **Effect of Local Kinetic Variations on Through-Hole Plating**, *Journal of the Electrochemical Society* **136**, No. 2, 368-374 (1989).

C. Laurent and E. Kay (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Properties of Metal Clusters in Polymerized Hydrocarbon Versus Fluorocarbon Matrices**, *Journal of Applied Physics* **65**, No. 4, 1717-1723 (1989).

C. Laurent, D. Mauri, E. Kay, and S. S. P. Parkin (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Magnetic Properties of Granular Copolymer Thin Films**, *Journal of Applied Physics* **65**, No. 5, 2017-2020 (1989).

J. D. Lawson (University of Waterloo, Waterloo N2L 3G1, Ontario, Canada) and T. C. Lau (IBM Canada, Don Mills, Ontario, Canada), **Order Constrained Tschyscheff Rational Approximation**, *Utilitas Mathematica* **34**, 45–52 (1988).

T. K. Leen (IBM Corporation, P.O. Box A, Essex Junction, VT 05452), **Theory and Practice of Proximity Correction by Secondary Exposure**, *Journal of Applied Physics* **65**, No. 4, 1776–1781 (1989).

F. K. LeGoues, R. Rosenberg, and B. S. Meyerson (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Kinetics and Mechanism of Oxidation of SiGe: Dry Versus Wet Oxidation**, *Applied Physics Letters* **54**, No. 7, 644–646 (1989).

F. K. LeGoues, R. Rosenberg, T. Nguyen, F. Himpsel, and B. S. Meyerson (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Oxidation Studies of SiGe**, *Journal of Applied Physics* **65**, No. 4, 1724–1728 (1989).

F. K. LeGoues, R. Rosenberg, and B. S. Meyerson (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Dopant Redistribution During Oxidation of SiGe**, *Applied Physics Letters* **54**, No. 8, 751–753 (1989).

H. Li (IBM Corporation, 650 Harry Road, San Jose, CA 95120) and M. Maresca (University of Genoa, Genoa, Italy), **Polymorphic-Torus Architecture for Computer Vision**, *IEEE Transactions on Pattern Analysis and Machine Intelligence* **11**, No. 3, 233–243 (1989).

C. J. Lin and D. Rugar (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Observation of Domain Expansion and Contraction in TbFe Films by Lorentz Microscopy**, *IEEE Transactions on Magnetics* **24**, No. 6, 2311–2313 (1988).

J. Lo, L. Franco, T. C. Huang, T. W. Wu, D. Miller, and R. Campbell (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Physical and Electro-Chemical Properties of High Rate Ion Beam Sputtered Fe Films**, *IEEE Transactions on Magnetics* **24**, No. 6, 3081–3083 (1988).

S. H. Lu, J. Quinn, D. Tian, F. Jona (State University of New York, Stony Brook, NY 11794), and P. M. Marcus (IBM, Yorktown Heights, NY), **Structural Properties of Epitaxial Films of Fe on Cu and Cu-Based Surface and Bulk Alloys**, *Surface Science* **209**, No. 3, 364–378 (1989).

M

E. D. Marshall, L. S. Yu, S. S. Lau (University of California at San Diego, La Jolla, CA 92093), T. F. Kuech, and K. L. Kavanagh (IBM, Yorktown Heights, NY), **Planar Ge/Pd and Alloyed Au-Ge-Ni Ohmic Contacts to N-Al_xGa_{1-x}As**, *Applied Physics Letters* **54**, No. 8, 721–723 (1989).

A. D. Marwick, C. R. Guarnieri, and J. M. Manoyan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Absence of Chain Oxygen Outgassing from Ion-Bombarded YBa₂Cu₃O_{7-x}**, *Applied Physics Letters* **53**, No. 26, 2713–2714 (1989).

C. M. Mate, R. Erlandsson, G. M. McClelland, and S. Chiang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Direct Measurement of Forces During Scanning Tunneling Microscope Imaging of Graphite**, *Surface Science* **208**, No. 3, 473–486 (1989).

T. W. McDaniel, B. I. Finkelstein, and W. C. Williams (IBM Corporation, Tucson, AZ 85744), **Design and Characterization of a Quadrilayer Magneto-Optic Disk**, *IEEE Transactions on Magnetics* **24**, No. 6, 2467–2469 (1988).

A. B. McLean and F. J. Himpsel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Band Dispersion of an Interface State: CaF₂/Si(111)**, *Physical Review B* **39**, No. 2, 1457–1460 (1989).

H. P. Meier, E. Van Gieson, W. Walter, C. Harder (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), M. Krah, and D. Bimberg (Technische Universität Berlin, Berlin, Federal Republic of Germany), **Molecular Beam Epitaxy of GaAs/AlGaAs Quantum Wells on Channeled Substrates**, *Applied Physics Letters* **54**, No. 5, 433–435 (1989).

M. Melas, P. Arnett (IBM Corporation, 650 Harry Road, San Jose, CA 95120), and J. Moon (Carnegie Mellon University, Pittsburgh, PA), **Noise in a Thin Metallic Medium: The Connection with Nonlinear Behavior**, *IEEE Transactions on Magnetics* **24**, No. 6, 2712–2714 (1988).

O. R. Melroy, M. F. Toney, G. L. Borges, M. G. Samant (IBM Corporation, 650 Harry Road, San Jose, CA 95120), J. B. Kortright, P. N. Ross (University of California, Berkeley, CA), and L. Blum (College of Natural Science, Rio Piedras, PR), **An In Situ Grazing Incidence X-Ray Scattering Study of the Initial Stages of Electrochemical Growth of Lead on Silver (111)**, *Journal of Electroanalytical Chemistry and Interfacial Electrochemistry* **258**, No. 2, 403–414 (1989).

F. P. Milliken, T. Penney, F. Holtzberg (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and Z. Fisk (Los Alamos National Laboratory, Los Alamos, NM), **Observation of a Coherent Quasiparticle Band in the Periodic Heavy Fermion System CeCu₆**, *Journal of Magnetism and Magnetic Materials* **76&77**, 201–206 (1988).

T. E. Mitchell (University of California, Los Alamos, NM 87544), J. D. Embury (McMaster University, Hamilton, Ontario, Canada), D. R. Clarke (IBM, Armonk, NY), and A. R. Cooper (Case Western Reserve University, Cleveland, OH), **Processing Ceramic Superconductors**, *Journal of Metals* **41**, No. 1, 6–10 (1989).

U. Mizutani (University of Basel, Klingelbergstrasse 82, CH-4056 Basel, Switzerland), R. Zehring, P. Oelhafen, V. L. Moruzzi, and H. J. Guntherodt (IBM, Yorktown Heights, NY), **The Photoemission Valence Band Structure of Hume Rothery Type (Ag_{0.5}Cu_{0.5}) 100-X Ge_x (X = 20, 22.5 and 25) Metallic Glasses**, *Journal of Physics, Condensed Matter* **1**, No. 7, 1365–1372 (1989).

A. Mödel (IBM Corporation, 650 Harry Road, San Jose, CA 95120), K. Domen (Tokyo Institute of Technology, Yokohama, Japan), and T. J. Chuang (IBM, San Jose, CA), **Laser-Induced CH₂ and C₂H₄ Formation and Desorption from CH₃I₂ Adsorbed on Al Surfaces**, *Chemical Physics Letters* **154**, No. 3, 187–192 (1989).

D. P. Murray, L. D. Kispert, S. Petrovic (The University of Alabama, Tuscaloosa, AL 35487), and J. E. Frommer (IBM, San Jose, CA), **Poly (3-Methylthiophene) Conducting Polymer Solutions and Films**, *Synthetic Metals* **28**, No. 1/2, C269–C274 (1989).

N

S. E. Nagler (University of Florida, Gainesville, FL 32611), P. Dutta (Northwestern University, Evanston, IL), S. K. Sinha (Exxon Research and Engineering Company, Annandale, NJ), P. M. Horn (IBM, Yorktown Heights, NY), and D. E. Moncton (Exxon Research and Engineering Company, Annandale, NJ), **Observation of a Metastable State in Monolayers of Carbon Tetrafluoride on Graphite**, *Physical Review B* **39**, No. 4, 2826-2829 (1989).

J. S. Nelson (Sandia National Laboratories, P.O. Box 5800, Livermore, CA 94550) and I. P. Batra (IBM, San Jose, CA), **Stability of the Strained-Layer Superlattice (GaP)₁(InP)₁ (001)**, *Physical Review B* **39**, No. 5, 3250-3253 (1989).

R. K. Nesbet (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Analytical Evaluation of Integrals Over Coulomb Wave Functions**, *Computer Physics Communications* **52**, No. 1, 29-33 (1988).

R. K. Nesbet (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Spin-Flip Pairing and CuO₂ Superconductors**, *Solid State Communications* **69**, No. 11, 1103-1106 (1989).

T. A. Nguyen, P. S. Alexopoulos, C. Hwang, S. E. Lambert, and I. L. Sanders (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Domain Structures in Thin Film Discrete Magnetic Tracks**, *IEEE Transactions on Magnetics* **24**, No. 6, 2733-2735 (1988).

C. S. Nichols, C. G. Van de Walle, and S. T. Pantelides (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Mechanisms of Equilibrium and Nonequilibrium Diffusion of Dopants in Silicon**, *Physical Review Letters* **62**, No. 9, 1049-1052 (1989).

O

K. Okuda, K. Sueoka, and K. G. Ashar (IBM Japan, Ltd., 5-19 Sanban-cho, Chiyoda-ku, Tokyo 102, Japan), **An Analytical Three-Dimensional Field Model of a Perpendicular Recording Head**, *IEEE Transactions on Magnetics* **24**, No. 6, 2479-2481 (1988).

H. L. Ong (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Modeling of Guest-Host and General Twisted-Nematic Liquid Crystal Displays**, *Proceedings of SID* **29**, No. 2, 161-165 (1988).

G. Y. Onoda (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), P. J. Steinhart (University of Pennsylvania, Philadelphia, PA), D. DiVincenzo (IBM, Yorktown Heights, NY), and J. F. S. Socolar (Harvard University, Cambridge, MA), **Local Growth of Quasicrystals, Reply**, *Physical Review Letters* **62**, No. 10, 1210 (1989).

E. L. Otter (IBM Corporation, Tucson, AZ 85744), **Write Saturation Current as a Function of Tape Magnetization**, *IEEE Transactions on Magnetics* **24**, No. 6, 2485-2487 (1988).

K. Ounadjela, H. Lefakis, V. S. Speriousu, C. Hwang, and P. S. Alexopoulos (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Effect of Surface Composition Observed by Auger Electron Spectroscopy of Magnetization and Magnetostriction of NiFe and NiFeRh Thin Films**, *Journal of Applied Physics* **65**, No. 3, 1230-1233 (1989).

P

D. Palmer, J. Coker, M. Meyer, and P. Ziperovich (IBM Corporation, Rochester, MN 55901), **Overwrite in Thin Media Measured by the Method of Pseudorandom Sequences**, *IEEE Transactions on Magnetics* **24**, No. 6, 3096-3098 (1988).

R. A. Palmer, C. J. Manning, J. A. Rzepiela, J. M. Widder (Duke University, Durham, NC 27706), and J. L. Chao (IBM, Research Triangle Park, NC), **Time-Resolved Spectroscopy Using Step-Scan Fourier Transform Interferometry**, *Applied Spectroscopy* **43**, No. 2, 193-195 (1989).

S.-K. Pan, A. R. Kerr (National Radio Astronomy Observatory, Charlottesville, VA 22903), M. J. Feldman (University of Virginia, Charlottesville, VA), A. W. Kleinsasser, J. W. Stasiak, R. L. Sandstrom, and W. J. Gallagher (IBM, Yorktown Heights, NY), **An 85-116 GHz SIS Receiver Using Inductively Shunted Edge Junctions**, *IEEE Transactions on Microwave Theory and Techniques* **37**, No. 3, 580-592 (1989).

E. S. Park, M. R. Mercer (University of Texas, Austin, TX 78712), and T. W. Williams (IBM, Austin, TX), **A Statistical Model for Delay-Fault Testing**, *IEEE Design and Test of Computers* **6**, No. 1, 45-55 (1989).

P. C. Pattnaik and D. M. Newns (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Estimate of Electron-Phonon Coupling Constant in High-T_c Superconductors**, *Physica C* **157**, No. 1, 13-15 (1989).

A. Peled (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Transformation Steps of Microstructures in Photodeposited Films of a-Se**, *Journal of Materials Research* **4**, No. 1, 177-179 (1989).

J. Pelous, R. Vacher, T. Woignier, J. L. Sauvajol (Université des Sciences et Techniques du Languedoc, F-34060 Montpellier, France), and E. Courtens (IBM, Rüschlikon, Switzerland), **Scaling Phonon-Fractal Dispersion Laws in Fractal Aerogels**, *Philosophical Magazine B* **59**, No. 1, 65-74 (1989).

J. P. Pelz and R. H. Koch (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Extremely Low-Noise Potentiometry with a Scanning Tunneling Microscope**, *Review of Scientific Instruments* **60**, No. 3, 301-305 (1989).

H. Peng (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and H. Stark (Illinois Institute of Technology, Chicago, IL), **One-Step Image Reconstruction from Incomplete Data in Computer Tomography**, *IEEE Transactions on Medical Imaging* **8**, No. 1, 16-31 (1989).

P. Perfetti (Istituto di Struttura della Materia, Via E. Fermi 38, I-00044 Frascati, Italy) and B. Reihl (IBM, Rüschlikon, Switzerland), **Inverse-Photoemission Studies of Si and III-V Compounds**, *Physica Scripta T25*, 173-180 (1988).

M. H. Peters, D. W. Cooper, and R. J. Miller (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Effects of Electrostatic and Inertial Forces on the Diffusive Deposition of Small Particles onto Large Disks: Viscous Axisymmetric Stagnation Point Flow Approximation**, *Journal of Aerosol Science* **20**, No. 1, 123-136 (1989).

E. Polak (University of California, Berkeley, CA 94720) and S. E. Salcudean (IBM, Yorktown Heights, NY), **On the Design of Linear Multivariable Feedback Systems Via Constrained Nondifferentiable Optimization In H^∞ Spaces**, *IEEE Transactions on Automatic Control* **34**, No. 3, 268-276 (1989).

C. G. Prohazka (IBM Corporation, Research Triangle Park, NC 27709), **Decoupling Link Scheduling Constraints in Multihop Packet Radio Networks**, *IEEE Transactions on Computers* **38**, No. 3, 455-458 (1989).

P. R. Pukite, S. S. Iyer, and G. J. Scilla (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ion Beam Enhanced Diffusion of B During Si Molecular Beam Epitaxy**, *Applied Physics Letters* **54**, No. 10, 916-918 (1989).

M. Putrino and S. Vassiliadis (IBM Corporation, 1701 North Street, Endicott, NY 13760), **Resolution of Branching with Prediction**, *International Journal of Electronics* **66**, No. 2, 163-172 (1989).

Q

L. Quach, R. Hornbogen, W. Volksen, and J. Economy (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Structure and Morphology of the 60/40 Poly(p-oxybenzoate-co-ethylene Terephthalate) Copolymer**, *Journal of Polymer Science, Polymer Chemistry* **27**, No. 3, 775-784 (1989).

R

J. F. Rabolt (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Structural Characterization of Self-Assembled and Langmuir-Blodgett Films at Ambient and Elevated Temperatures**, *Journal de Chimie Physique et de Physico-Chimie Biologique* **85**, No. 11-1, 1027-1029 (1988).

V. Raman (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193) and T. G. Langdon (University of Southern California, Los Angeles, CA), **An Examination of Cyclic Grain Boundary Migration and Cavitation in an Al 3% Mg Solid Solution Alloy**, *Acta Metallurgica* **37**, No. 2, 725-737 (1989).

V. Raman (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), T. Watanabe (Tohoku University, Sendai, Japan), and T. G. Langdon (University of Southern California, Los Angeles, CA), **A Determination of the Structural Dependence of Cyclic Migration in Polycrystalline Aluminum Using Electron Channeling Pattern Analysis**, *Acta Metallurgica* **37**, No. 2, 705-714 (1989).

H. A. J. M. Reinen, T. T. J. M. Berendschot, P. C. M. Christianen, H. J. A. Bluyssen (University of Nijmegen, 6525 Ed Nijmegen, The Netherlands), and H. P. Meier (IBM, Rüschlikon, Switzerland), **Cooling and Radiative Recombination of Resonantly Excited 2D Carriers in Magnetic Fields up to 25 T Studied Using Picosecond Time-Resolved Photoluminescence**, *Superlattices and Microstructures* **5**, No. 3, 455-458 (1989).

W. P. Risk and W. Lenth (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Diode Laser Pumped Blue-Light Source Based on Intracavity Sum Frequency Generation**, *Applied Physics Letters* **54**, No. 9, 789-791 (1989).

J. Rissanen and K. M. Mohiuddin (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Multiplication-Free Multialphabet Arithmetic Code**, *IEEE Transactions on Communications* **37**, No. 2, 93-98 (1989).

L. R. Rockett (IBM Corporation, 9500 Godwin Drive, Manassas, VA 22110), **An SeU-Hardened CMOS Data Latch Design**, *IEEE Transactions on Nuclear Science* **35**, No. 6, 1682-1687 (1988).

M. S. Roos (University of California, Berkeley, CA 94720), R. A. Mushlin (IBM, Armonk, NY), E. Veklerov (University of California, Berkeley, CA), J. D. Port, C. Ladd, and C. G. Harrison (IBM, Armonk, NY), **An Instrument Control and Data Analysis Program Configured for NMR Imaging**, *IEEE Transactions on Nuclear Science* **36**, No. 1, 988-992 (1989).

C. Rossel (IBM Corporation, Säumerstrasse 4, 8803 Rüschlikon, Switzerland), Y. Meno (IBM, San Jose, CA), and I. Morgenstern (IBM, Rüschlikon, Switzerland), **Memory Effects in a Superconducting Y-Ba-Cu-O Single Crystal: A Similarity to Spin Glasses**, *Physical Review Letters* **62**, No. 6, 681-684 (1989).

J. R. Rossignac (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and H. B. Voelcker (Cornell University, Ithaca, NY), **Active Zones in CSG for Accelerating Boundary Evaluation, Redundancy Elimination, Interference Detection, and Shading Algorithms**, *ACM Transactions on Graphics* **8**, No. 1, 51-87 (1989).

J. E. Rothenberg and D. Grischkowsky (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Observation of the Formation of an Optical Intensity Shock and Wave Breaking in the Nonlinear Propagation of Pulses in Optical Fibers**, *Physical Review Letters* **62**, No. 5, 531-534 (1989).

S

K. L. Saenger (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **An Interferometric Calorimeter for Thin Film-Thermal Diffusivity Measurements**, *Journal of Applied Physics* **65**, No. 4, 1447-1452 (1989).

T. Sajoto, M. Santos, J. J. Heremans, M. Shayegan (Princeton University, Princeton, NJ 08544), M. Heiblum, M. V. Weckwerth, and U. Meirav (IBM, Yorktown Heights, NY), **Use of Superlattices to Realize Inverted GaAs/AlGaAs Heterojunctions with Low-Temperature Mobility of 2×10^6 cm²/Vs**, *Applied Physics Letters* **54**, No. 9, 840-842 (1989).

I. L. Sanders, J. K. Howard, S. E. Lambert, and T. Yogi (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Influence of Coercivity Squareness on Media Noise in Thin-Film Recording Media**, *Journal of Applied Physics* **65**, No. 3, 1234-1237 (1989).

P. Santhanam (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Weak Localization in Normal-Metal Loops: Influence of Boundary Conditions**, *Physical Review B* **39**, No. 4, 2541-2548 (1989).

J. L. Sanz (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Multidimensional Signal Representation by Zero Crossings: An Algebraic Study**, *SIAM Journal on Applied Mathematics* **49**, No. 1, 281-295 (1989).

R. P. Saxon (SRI International, Menlo Park, CA 94025), R. K. Nesbet (IBM, San Jose, CA), and C. J. Noble (SERC Daresbury Laboratory, Warrington, United Kingdom), **Photoionization of Excited Atomic Oxygen: Theory and Calculations**, *Physical Review A* **39**, No. 3, 1156-1162 (1989).

L. B. Schein (IBM Corporation, 650 Harry Road, San Jose, CA 95120), G. S. P. Castle, and A. Dean (The University of Western Ontario, London, Canada), **Theory of Monocomponent Development**, *Journal of Imaging Technology* **15**, No. 1, 9-14 (1989).

J. Schneider, H. Ringsdorf (University of Mainz, D-6500 Mainz, Federal Republic of Germany), and J. F. Rabolt (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Structural Studies of Polymers with Hydrophilic Spacer Groups: Infrared Spectroscopy of Langmuir-Blodgett Multilayers of Preformed Polymers with Hydrocarbon Side Chains**, *Macromolecules* **22**, No. 1, 205-210 (1989).

R. C. Schneider (IBM Corporation, Tucson, AZ 85744), **Sequence (Viterbi-Equivalent) Decoding**, *IEEE Transactions on Magnetics* **24**, No. 6, 2539-2541 (1988).

R. C. Schneider (IBM Corporation, Tucson, AZ 85744), **Write Equalization for Generalized (D,K) Codes**, *IEEE Transactions on Magnetics* **24**, No. 6, 2533-2535 (1988).

A. G. Schrott, K. N. Tu, N. C. Yeh, G. Singco, A. Levi, and C. C. Tsuei (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Effects of Ag on the Surface Barrier for Depletion of Oxygen from Polycrystalline YBa₂Cu₃O₇ Oxides**, *Physical Review B* **39**, No. 4, 2910-2913 (1989).

E. K. Schweizer and C. T. Rettner (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **He and Ne Diffraction from W(100): Two Views of the $c(2 \times 2)$ Phase Transition**, *Surface Science* **208**, No. 1,2, L29-L33 (1989).

K. Seo, M. Heiblum, C. M. Knoedler (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), J. E. Oh, J. Pamulapati, and P. Bhattacharya (University of Michigan, Ann Arbor, MI), **High-Gain Pseudomorphic InGaAs Base Ballistic Hot-Electron Device**, *IEEE Electron Device Letters* **10**, No. 2, 73-75 (1989).

M. W. Shafer, T. Penney, B. L. Olson, R. L. Greene, and R. H. Koch (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Hole Concentrations, Hall Number, and T_c Relationships in Substituted YBa₂Cu₃O₇**, *Physical Review B* **39**, No. 4, 2914-2917 (1989).

C. W. Sheen and R. W. Snyder (IBM Corporation, 1701 North Street, Endicott, NY 13760), **An Automated Integration Routine for FT-IR Spectrometers**, *Computers and Chemistry* **13**, No. 1, 61-67 (1989).

A. D. Sherry (University of Texas, Box 830688, Richardson, TX 75083), R. D. Brown, C. F. Gerald, S. H. Koenig, K. T. Kuan, and M. Spiller (IBM, Yorktown Heights, NY), **Synthesis and Characterization of the Gadolinium (3⁺) Complex of DOTA-Propylamide: A Model DOTA Protein Conjugate**, *Inorganic Chemistry* **28**, No. 3, 620-622 (1989).

S.P. Shieh (Silicon Systems, Tustin, CA 92680), C. K. Wang (IBM, San Jose, CA), R. Castello (SGS Microelettronica, Milan, Italy), and P. R. Gray (University of California, Berkeley, CA), **A Scalable Switched-Capacitor Filter Implemented in 1.23- μ m Technology**, *IEEE Journal of Solid-State Circuits* **24**, No. 1, 174-177 (1989).

R. G. Simmons and D. K. Lee (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Advanced Particulate Media for High Density DASD**, *IEEE Transactions on Magnetics* **24**, No. 6, 2868-2870 (1988).

D. J. Singel, H. Seidel, R. D. Kendrick, and C. S. Yannoni (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **A Spectrometer for EPR, DNP, and Multinuclear High-Resolution NMR**, *Journal of Magnetic Resonance* **81**, No. 1, 145-161 (1989).

L. M. Siperko (IBM Corporation, 1701 North Street, Endicott, NY 13760), **Surface Enhanced Raman Spectroscopy of CrO₃/H₂SO₄-Etched Polyethylene Films**, *Applied Spectroscopy* **43**, No. 2, 226-229 (1989).

J. Slinkman (IBM Corporation, P.O. Box A, Essex Junction, VT 05452), A.-Z. Zhang, and R. E. Doezema (University of Oklahoma, Norman, OK), **Motional Binding in InAs with a Realistic Surface Potential**, *Physical Review B* **39**, No. 2, 1251-1254 (1989).

J. L. Solomon, R. J. Madix (Stanford University, Stanford, CA 94305), and J. Stöhr (IBM, San Jose, CA), **π -Bonded Intermediates in Alcohol Oxidation: Orientations of Allyloxy and Propargyloxy on Ag(110) by Near Edge X-Ray Absorption Fine Structure**, *Journal of Chemical Physics* **89**, No. 8, 5316-5322 (1988).

J. F. Sowa (IBM Corporation, 500 Columbus Avenue, Thornwood, NY 10594), **Logical Foundations of Artificial Intelligence**, *Artificial Intelligence* **38**, No. 1, 125-131 (1989).

F. H. M. Spit, D. Gupta, and K. N. Tu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Diffusivity and Solubility of Ni (⁶³Ni) in Monocrystalline Si**, *Physical Review B* **39**, No. 2, 1255-1260 (1989).

J. K. Spong (IBM Corporation, 650 Harry Road, San Jose, CA 95120), H. A. Mizes, L. J. Lacombe, M. M. Dovek (Stanford University, Stanford, CA), J. E. Frommer, and J. S. Foster (IBM, San Jose, CA), **Contrast Mechanism for Resolving Organic Molecules with Tunnelling Microscopy**, *Nature* **338**, No. 6211, 137-139 (1989).

J. E. Stern, B. D. Terris, H. J. Mamin, and D. Rugar (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Deposition and Imaging of Localized Charge on Insulator Surfaces Using a Force Microscope**, *Applied Physics Letters* **53**, No. 26, 2717-2719 (1988).

M. Suto, J. C. Han, L. C. Lee (San Diego State University, San Diego, CA 92182), and T. J. Chuang (IBM, San Jose, CA), **Emission Spectra of SiF₃**, *Journal of Chemical Physics* **90**, No. 5, 2834-2835 (1989).

T. Suzuki (IBM Corporation, 650 Harry Road, San Jose, CA 95120), C. J. Lin (Tohoku University, Sendai, Japan), and A. E. Bell (IBM, San Jose, CA), **Magnetic and Magneto-Optical Properties of Nd-Tb-Fe-Co Vertically Magnetized Films**, *IEEE Transactions on Magnetics* **24**, No. 6, 2452-2454 (1988).

T

D. D. Tang and P.-F. Lu (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **A Reduced-Field Design Concept for High-Performance Bipolar Transistors**, *IEEE Electron Device Letters* **10**, No. 2, 67-69 (1989).

Y. S. Tang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Explicit Formula for Thin Film Disk Noise Based on Zig-Zag Domain Transitions**, *IEEE Transactions on Magnetics* **24**, No. 6, 3102-3104 (1988).

Y.-S. Tang and C. Tsang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Theoretical Study of the Overwrite Spectra Due to Hard-Transition Effects**, *IEEE Transactions on Magnetics* **25**, No. 1, 698-702 (1989).

M. A. Taubenblatt (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Lateral Forces and Topography Using Scanning Tunneling Microscopy with Optical Sensing of the Tip Position**, *Applied Physics Letters* **54**, No. 9, 801-803 (1989).

M. J. Tauber (IBM Corporation, Heidelberg, Federal Republic of Germany), **Metal Models Manipulation of Virtual Objects with the Help of Virtual Machines**, *Zeitschrift für Psychologie* **196**, No. 4, 335-350 (1988).

J. Tersoff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Sample-Dependent Resolution in Scanning Tunneling Microscopy**, *Physical Review B* **39**, No. 2, 1052-1057 (1989).

J. Toner (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Elastic Anisotropies and Long-Ranged Interactions in Solid Membranes**, *Physical Review Letters* **62**, No. 8, 905-908 (1989).

H. M. Tong, K. L. Saenger (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and C. J. Durning (Columbia University, New York, NY), **A Study of Solvent Diffusion in Thin Polyimide Films Using Laser Interferometry**, *Journal of Polymer Science, Polymer Physics* **27**, No. 3, 689-708 (1989).

R. D. Traub, R. Miles (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and R. K. S. Wong (Columbia University, New York, NY), **Model of the Origin of Rhythmic Population Oscillations in the Hippocampal Slice**, *Science* **243**, No. 4896, 1319-1325 (1989).

C. Tsang and Y. Tang (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **An Experimental Study of Hard Transition Peakshifts Through the Overwrite Spectra**, *IEEE Transactions on Magnetics* **24**, No. 6, 3087-3089 (1988).

Y. O. Tu (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Mathematical Modeling and Computer Simulation for Spin Coating of Ferrofluid**, *IEEE Transactions on Magnetics* **24**, No. 6, 3129-3131 (1988).

U

R. G. Ulbrich, J. A. Kash, and J. C. Tsang (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Hot-Electron Recombination at Neutral Acceptors in GaAs: A cw Probe of Femtosecond Intervalley Scattering**, *Physical Review Letters* **62**, No. 8, 949-952 (1989).

V

R. Vacher, T. Woignier, J. Pelous (Université des Sciences et Techniques du Languedoc, F-34060 Montpellier, France), G. Coddens (CEN-Saclay, Gif-sur-Yvette, France), and E. Courtens (IBM, Rüschlikon, Switzerland), **The Density of Vibrational States of Silica Aerogels**, *Europhysics Letters* **8**, No. 2, 161-166 (1989).

C. G. Van de Walle (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Atomic and Electronic Structure of Si-Ge Superlattices**, *Physical Review Letters* **62**, No. 8, 974 (1989).

C. G. Van de Walle (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Ban Lineups and Deformation Potentials in the Model-Solid Theory**, *Physical Review B* **39**, No. 3, 1871-1883 (1989).

A. Varma (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and C. S. Raghavendra (University of Southern California, Los Angeles, CA), **Fault-Tolerant Routing in Multistage Interconnection Networks**, *IEEE Transactions on Computers* **38**, No. 3, 385-393 (1989).

S. Vassiliadis, E. M. Schwarz, and D. J. Hanrahan (IBM Corporation, 1701 North Street, Endicott, NY 13760), **A General Proof for Overlapped Multiple-Bit Scanning Multiplications**, *IEEE Transactions on Computers* **38**, No. 2, 173-183 (1989).

A. H. Verbruggen, H. Stoll (Max-Planck-Institut, 7000 Stuttgart, Federal Republic of Germany), K. Heeck (Free University, Amsterdam, The Netherlands), and R. H. Koch (IBM, Yorktown Heights, NY), **A Novel Technique for Measuring Resistance Fluctuations Independently of Background Noise**, *Applied Physics Letters* **48**, No. 3, 233-236 (1989).

G. Vijayan, H. H. Chen, and C. K. Wong (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **On VH-V-Routing in Channels with Irregular Boundaries**, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **8**, No. 2, 146-152 (1989).

L. Viña (Universidad de Zaragoza, C.S.I.C., 50009, Zaragoza, Spain), M. Potemski, J. C. Maan (Max-Planck-Institut, Grenoble, France), G. E. W. Bauer (Philips Research Laboratories, Eindhoven, The Netherlands), E. E. Mendez (IBM, Yorktown Heights, NY), and W. I. Wang (Columbia University, New York, NY), **Stark and Zeeman Effects in Excitons in GaAs/GaAlAs Quantum Wells**, *Superlattices and Microstructures* **5**, No. 3, 371-374 (1989).

W

E. Walach (IBM Israel, IL-32000 Haifa, Israel), A. Shmulewiz, Y. Itzhak, and Z. Heyman (Tel Aviv University, Rehovot, Israel), **Local Tissue Attenuation Images Based on Pulsed-Echo Ultrasound Scans**, *IEEE Transactions on Biomedical Engineering* **36**, No. 2, 211-221 (1989).

A. Wallash (IBM Corporation, 5600 Cottle Road, San Jose, CA 95193), **Reproduction of Slider Vibrations During Head Disk Interactions Using PZT Sensors**, *IEEE Transactions on Magnetics* **24**, No. 6, 2763-2765 (1988).

J. R. Wallis (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Catastrophes, Computing, and Containment: Living with Our Restless Habitat**, *Speculations in Science and Technology* **11**, No. 4, 295-315 (1988).

S. Washburn (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Microelectronics: Feedback Cooling of Currents**, *Nature* **337**, No. 6208, 597-598 (1989).

B. C. Webb (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598) and S. Schultz (University of California, La Jolla, CA),

Detection of the Magnetization Reversal of Individual Interacting Single Domain Particles Within Co-Cr Columnar Thin Films, *IEEE Transactions on Magnetics* **24**, No. 6, 3006-3008 (1988).

W. M. Webb, W. Schneider (Ohio University, Athens, OH 45701), K. L. Marsh, and B. Davis (IBM, Yorktown Heights, NY), **Interaction Between Self Monitoring and Manipulating States of Self Awareness**, *Journal of Personality and Social Psychology* **56**, No. 1, 70-80 (1989).

J. T. Wetzel (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Preparation of Cross-Sectional Transmission Electron Microscopy Samples by Electron Beam Lithography and Reactive Ion Etching**, *Journal of Electron Microscopy Technique* **11**, No. 1, 62-69 (1989).

W. C. Williams, B. I. Finkelstein, and T. W. McDaniel (IBM Corporation, Tucson, AZ 85744), **Spot and Mark Size Characterization in Magneto-Optic Recording**, *IEEE Transactions on Magnetics* **24**, No. 6, 2323-2325 (1988).

S. Wimer (IBM Israel Scientific Center, Haifa 32000, Israel), I. Koren (University of Massachusetts, Amherst, MA), and I. Cederbaum (Technion-Israel Institute of Technology, Haifa, Israel), **Optimal Aspect Ratios of Building Blocks in VLSI**, *IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems* **8**, No. 2, 139-145 (1989).

R. L. Wisnieff (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Line Delay and Capacitive Crosstalk Effects in TFT/LCDs**, *Proceedings of SID* **29**, No. 2, 173-178 (1988).

J. J. Wu, D. W. Cooper, and R. J. Miller (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Improved Sequencing System for Sampling Clean Gases to Obtain Particle Size Distributions with a Diffusion Battery and a Condensation Nucleus Counter**, *Review of Scientific Instruments* **60**, No. 2, 258-260 (1989).

J. J. Wu, R. J. Miller, D. W. Cooper, J. F. Flynn, D. J. Delson, and R. F. Teagle (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **Deposition of Sub-Micron Aerosol Particles During Integrated Circuit Manufacturing: Experiments**, *Journal of Environmental Science* **32**, No. 1, 27+ (1989).

S. C. Wu, C. K. C. Lok, J. Sokolov, F. Jona (State University of New York, Stony Brook, NY 11794), and A. Taleb-Ibrahimi (IBM, Yorktown Heights, NY), **Resonance Photoemission at the 2p Excitation Threshold of Ni(001)**, *Physical Review B* **39**, No. 2, 1058-1062 (1989).

Y

T. Yogi, G. L. Gorman, C. Hwang, M. A. Kakalec, and S. E. Lambert (IBM Corporation, 650 Harry Road, San Jose, CA 95120), **Dependence of Magnetics, Microstructures and Recording Properties on Underlayer Thickness in CoNiCr/Cr Media**, *IEEE Transactions on Magnetics* **24**, No. 6, 2727-2729 (1988).

L. S. Yu, L. C. Wang, E. D. Marshall, S. S. Lau (University of California at San Diego, La Jolla, CA 92093), and T. F. Kuech (IBM, Yorktown Heights, NY), **The Temperature Dependence of Contact Resistivity of the Ge/Pd and the Si/Pd Nonalloyed Contact Scheme on n-GaAs**, *Journal of Applied Physics* **65**, No. 4, 1621-1625 (1989).

E. K. Yung, L. T. Romankiw (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), and R. C. Alkire (University of Illinois, Urbana, IL), **Plating of Copper into Through-Holes and Vias**, *Journal of the Electrochemical Society* **136**, No. 1, 206-215 (1989).

Z

J. F. Ziegler and J. M. Manoyan (IBM Corporation, P.O. Box 218, Yorktown Heights, NY 10598), **The Stopping of Ions in Compounds**, *Nuclear Instruments and Methods in Physics Research B* **35**, No. 3,4, 215-228 (1988).